

The systematic endeavor to construct a colloidal mixture which would display some of the fundamental physical properties of protoplasm of plants has resulted in finding that a mixture of substances of two of the three more important groups of constituents, carbohydrates and proteins, shows the imbibitional behavior of tissues and tracts of protoplasts of the plant. The differential action of such colloidal masses in distilled water, acid and alkaline solutions yields many striking parallels with growth. The general identity of constitution of these colloidal mixtures and of cell-masses, and the obvious similarity of their behavior, together with newly determined features of carbohydrate metabolism not described in this paper, make it possible to correlate more closely the processes of imbibition, metabolism and growth, and on the bases of their interrelation, to interpret growth enlargement and incidental variations in volume and size of organs.

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SOCIETIES AND ACADEMIES

THE AMERICAN MATHEMATICAL SOCIETY

A REGULAR meeting of the society was held at Columbia University on Saturday, April 28. The attendance included twenty-seven members. Professor E. W. Brown presided at the morning session and Professor Edward Kasner at the afternoon session. The council announced the election of the following persons to membership in the society: Professor C. F. F. Garis, Union College; Professor F. J. Holder, University of Pittsburgh; Dr. V. H. Wells, University of Michigan; Professor W. L. Wright, Lincoln University, Pa. Six applications for membership were received.

Professor L. P. Eisenhart was reelected a member of the editorial committee of the *Transactions*. A committee consisting of Professors Focke, Cairns, Cole, Huntington, Pitcher and D. T. Wilson was appointed to have charge of the arrangements for the summer meeting of the society at Cleveland, September 4-5.

The following papers were read at this meeting:
W. B. Fite: "The relation between the zeros of a solution of a linear homogeneous differential equation and those of its derivatives."

Samuel Beatty: "The inversion of an analytic function."

Maurice Fréchet: "Relations entre les notions de limite et de distance."

O. E. Glenn: "A fundamental system of formal covariants mod 2 of the binary cubic."

Luigi Bianchi: "Concerning singular transformations B_k of surfaces applicable to quadrics."

J. E. Rowe: "The projection of a line section upon the rational plane cubic curve."

L. B. Robinson: "On partial differential equations which define certain covariants."

J. K. Whittemore: "Kinematic properties of ruled surfaces."

Olive C. Hazlett: "On Huntington's set of postulates for abstract geometry."

E. F. Simonds: "Differential invariants in the plane."

J. Douglas: "On certain two-point properties of doubly infinite families of curves on an arbitrary surface."

L. P. Eisenhart: "Conjugate planar nets with equal invariants."

Alexander Pell: "Solutions of the differential equation $dx^2 + dy^2 + dz^2 = ds^2$ and their application."

C. A. Fischer: "On bilinear and n -linear functionals."

E. B. Wilson: "Classification of real strains in hyperspace."

F. H. Safford: "Irrational transformations of the general elliptic element."

J. H. Weaver: "Some algebraic curves."

R. L. Moore: "A necessary and sufficient condition that a sequence of simple arcs of specified type should be equivalent, from the standpoint of analysis situs, to a sequence of straight segments."

Dunham Jackson: "Second note on the parametric representation of an arbitrary continuous curve."

Dunham Jackson: "Roots and singular points of semi-analytic functions."

Oswald Veblen: "Doubly oriented lines."

G. M. Green: "The intersections of a straight line and a hyperquadric."

F. W. Beal: "On a congruence of circles."

G. A. Miller: "Possible characteristic operators of a group."

R. D. Carmichael: "Examples of a remarkable class of series."

W. L. Hart: "Note on infinite systems of linear equations."

F. N. COLE,
Secretary